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Dept- Chemical Engineering

MATRIC NO: 18/eng01/005

 ENGINEERING CONSULTANCY ASSIGNMENT

1. SCOPE OF WORK

OVERVIEW- The Alfa belgore hall at Afe Babalola University is under construction based on the lack of space in it. The work commenced on the 14th of January with aim of expanding and elevating the building to create space.

 Tasks in the process of construction

* Rearrangement and evacuation of the area and building
* Demolishion of walls of the building
* Design of new plan
* Construction of new plan
* Roofing
* Wiring/plumbing
* Painting

PROFESSIONALS TO BE CONSULTED

* Civil Engineers I.eplumbing, bricklayers etc
* Electrical Engineers
* Painters
* Architects

ESTIMATED TIME OF WORK

* Rearrangement and evacuation of the area and building —1week
* Demolishion of walls of the building —1week
* Design of new plan—2weeks
* Construction of new plan—3weeks
* Roofing —3weeks
* Wiring/plumbing —2 ½ weeks
* Painting—2 ½ weeks

PRODUCTS & ESTIMATED PRICES

|  |  |
| --- | --- |
| Cement bags  | N15500 |
| Sand | N300000 |
| Bricks or blocks | N100000 |
| Iron/ rods | N50000 |
| Woods/nails | N50000 |
| Zinc(aluminum) | N300000 |
| Buckets of paints | N300000 |
| Germain floor | N200000 |

ESTIMATED AMOUNT FOR HAND WORK

|  |  |
| --- | --- |
| Civil engineers | N3500000 |
| Electrical engineers | N1500000 |
| Architects | N700000 |
| +products | N5700000 |

Total estimated cost := N7000000

RESULT

Thé construction has been completed, now been upgraded and has better efficiency and had been expanded

2)GANT CHART

|  |  |  |  |
| --- | --- | --- | --- |
| TASK | DURATION | START DATE  | END DATE |
| Rearrangement & Evacuation of Hall | 7 | 14-Jan | 21-Jan |
| Demolishment of Wall | 7 | 21-Jan | 28-Jan |
| Design of new plan | 14 | 28-Jan | 11-Feb |
| Construction of new plan | 21 | 11-Feb | 2-Mar |
| Roofing | 21 | 2-Mar | 23-Mar |



4) Thé building and construction site were secured because they are often natural targets for thieves as they generally contain lots of high value plants, materials and equipments. This can be easily accessible for criminals if proper and effective security is not put in place.

Also to reduce the risk of severe injuries from the construction materials and avoid vandilazation of properties and construction materials

5) BEME

|  |  |  |
| --- | --- | --- |
| Description  | Rate(%) of N7000000 | Cost(N) |
| Miscellaneous  | 10 | 700000 |
| Tec for consultancy | 15 | 1050000 |
| Tec for site preparation | 5 | 350000 |
| Tec for transportation  | 12 | 840000 |
| Text as profit | 20 | 1400000 |
| Total | 62 | 4340000 |

Total cost of BEME- Total estimated cost = N2660000

6) PAYMENT SCHEDULE

TOTAL REMAIN AMOUNT =N2660000

|  |  |  |
| --- | --- | --- |
| Description  | Rate(%) | Cost(N) |
| Mobilisation  | 30 | 798000 |
| Text at 50% of completion | 30 | 798000 |
| Final payment tec at completion | 40 | 1064000 |
| 6month defect liability period | 10 | 266000 |

7) MEANINGS

BEME- Bill of Engineering Measurement and Evaluation also referee to as bill , it’s a tool used before, during and post construction to asses and value the cost of construction works

Defect liability period- A defects liability period is a period of time following practical completion during which a contractor remains liable under the building contract for dealing with any defects which become apparent.

LEAD CONSULTANT - The lead consultant is the consultant that directs the work of the consultant team and is the main point of contact for communication between the client and the consultant team, except for on significant design issues where the lead designer may become the main point of contact.

PROJET LIFE CYCLE- A project life cycle is the sequence of phases that a project goes through from its initiation to its closure.

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)- Environmental Impact Assessment (EIA) is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.